



Project families: How to improve learning in thesis work and increase impact on research

Goltermann, Per ; Ottosen, Lisbeth M.; Nielsen, Jens Henrik; Schmidt, Jacob Wittrup; Jensen, Pernille Erland; Olesen, John Forbes; Kirkelund, Gunvor

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Project families: How to improve learning in thesis work and increase impact on research

Per Goltermann

Lisbeth M. Ottosen

Jens Henrik Nielsen

Jacob Wittrup Schmidt

Pernille Erland Jensen

John Forbes Olesen

Gunvor Kirkelund

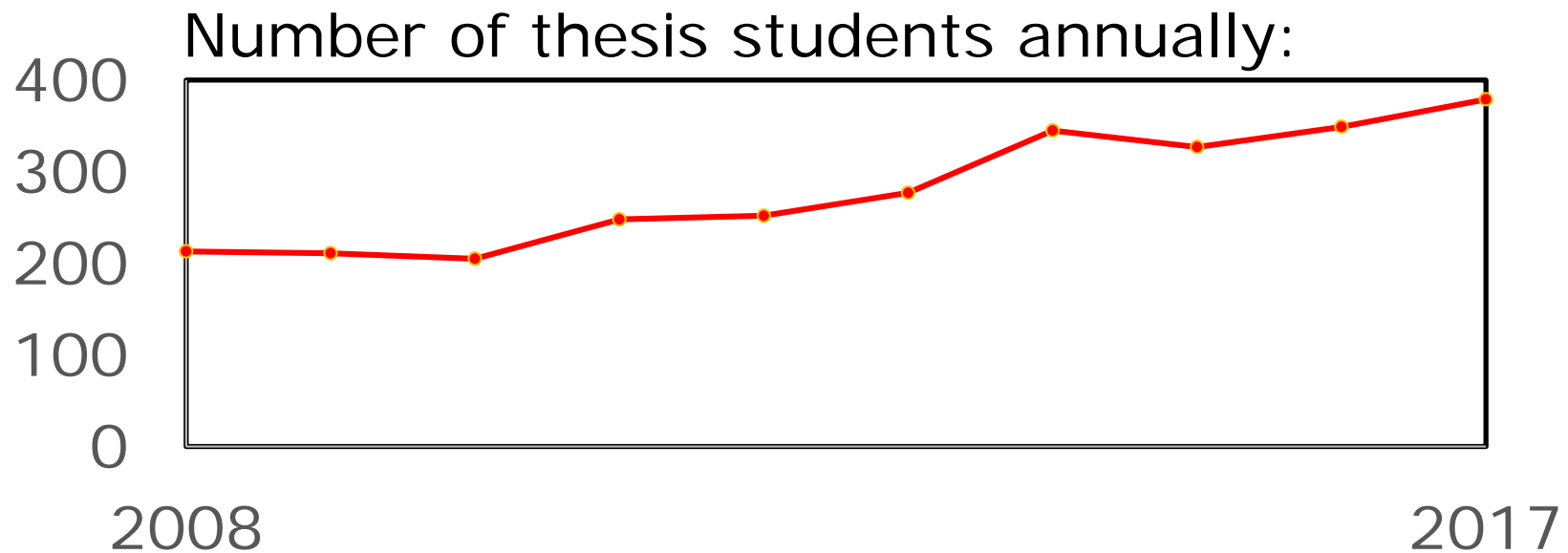


$$\frac{\partial T}{\partial t} = \frac{\lambda}{\rho c_p} \frac{\partial^2 T}{\partial x^2} \quad \Delta \int_a^b \varepsilon \Theta^{\sqrt{17}} + \Omega \int \delta e^{i\pi} = \{2.7182818284\}$$

$$\infty = \chi^2 \Sigma !$$

Why do we need this ?

- Improve the learning and performance
- Increase research and innovation activities



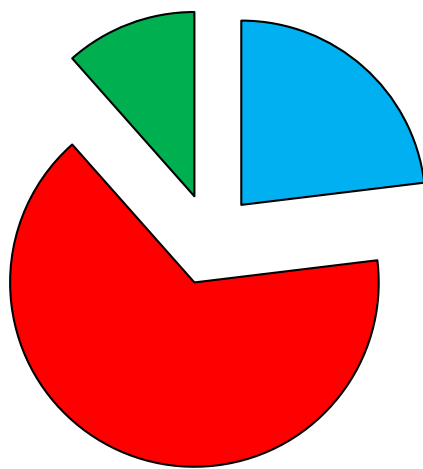
What did we actually do ?

- Independent projects focusing on a main problem
- Facilitate peer interaction

This involves

- Start-up meeting in project family
- Weekly project family meeting with all students
- Individual meetings – if needed
- Project status at every project family meeting
- Task groups may be formed
- Group instructions
- Sharing experimental facility
- Midterm presentation (poster) and discussion
- Sharing a project room with the family

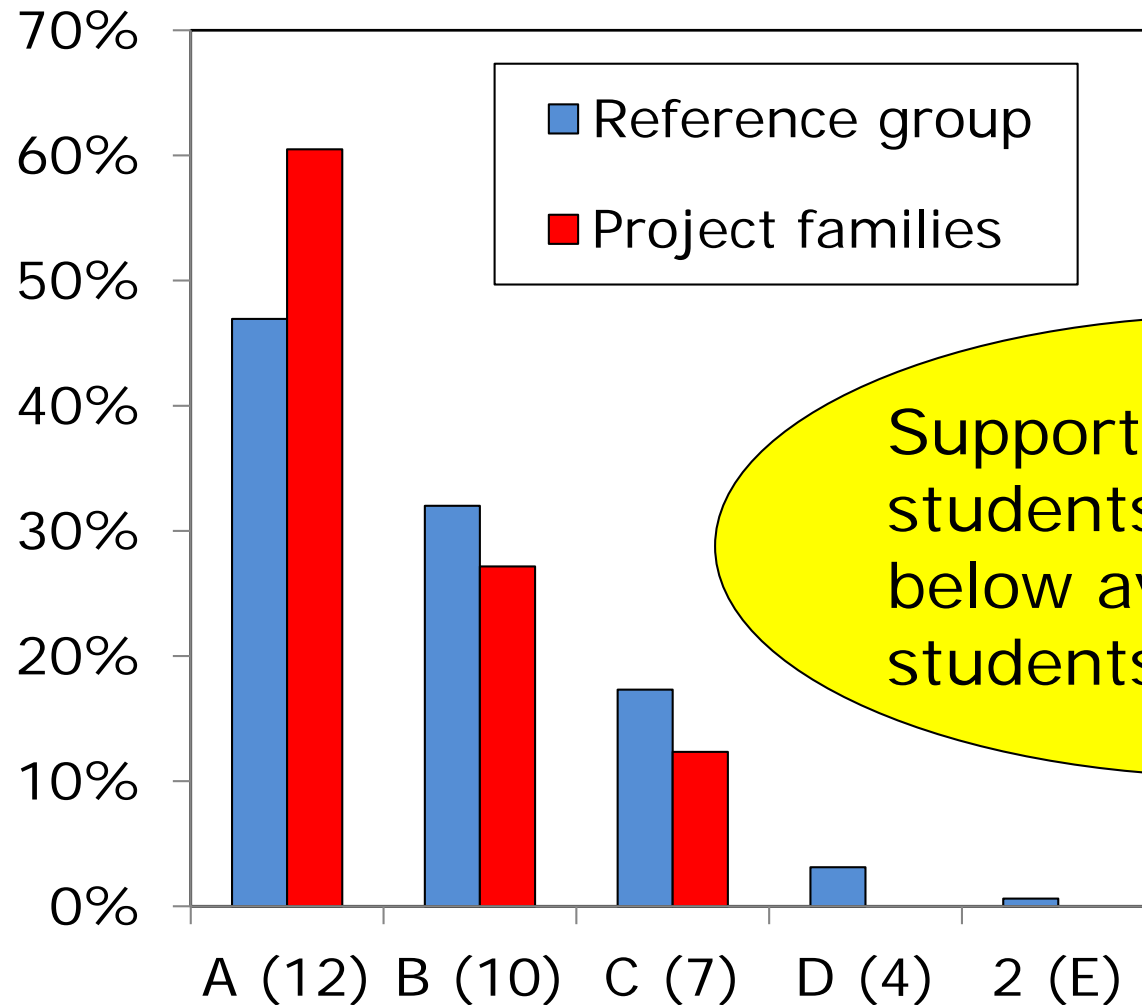
Did the students like the concept ?



- I achieved a lot more than by a stand-alone project
- I achieved more than by a stand-alone project
- No effect
- I achieved less than by a stand-alone project

Quotation: When you are in a project family, you have more angles to your work, you achieve more on less time, because you are constantly challenged in your way of thinking. If you work alone, that will be slower.

Did it work ?



Supports the best of the students and turns the below average into good students

Supervisors and lab staff say

- Better and more independent students
- Better behavior in the lab
- Better skills in communication
- Smarter use of resources (students, supervisors and laboratories)
- Significantly better input to innovation, research and development

A piece of advice

- Plan the start well ahead
- Make sure the lab is able to support
- Clarify your expectations (and distinguish between BEng and BSc and MSc thesis students)
- 6-10 students in a family is optimal
- Book a project room for all



Conclusions

- ✓ The students love the concept
 - ✓ The students learn more and go deeper into the problems
 - ✓ The students communicate better
 - ✓ The students get better grades
-
- ✓ Laboratory use is more rational
 - ✓ More laboratory activities are possible
-
- ✓ Thesis works contribute better to R&D

The end



We appreciate all the help we received from our laboratories and our 100+ project family students:

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